

REMARKS

The Pending Claims

Claims 59-61, and 63 have been cancelled, Claims 26, 37, 48 have been amended, and Claims 64-66 have been added. Thus, Claims 26, 37, 48, 58, 62, and 64-66 currently are pending in the application.

Summary of the Office Action

Claims 26, 37, 48, and 58-63 were rejected under 35 U.S.C § 103(a) as being unpatentable over US Patent 6,291,023 (Nigam), in view of US Patent 6,387,473 (Sismondi et al.), in further view of US Patent 6,183,851 (Mishima).

Claims 26, 37, 48, and 58-63 were rejected under 35 U.S.C § 103(a) as being unpatentable over EP 0 896 883 (Kawai et al.) in view of US Patent 6,020,032 (Romano et al.), in further view of US Patent 5,372,884 (Abe et al.).

Claims 26, 37, 48, and 58-63 were rejected under 35 U.S.C § 103(a) as being unpatentable over US Patent 6,183,851 (Mishima) in view of US Patent 5,981,045 (Kuwabara et al.).

Discussion of the Rejections

Claims 26, 37, 48, and 58-63 were rejected as being unpatentable over Nigam, in view of Sismondi et al., in further view of Mishima. Applicants respectfully traverse this rejection.

In the amended claims 37 and 48, the treated textile substrate is subjected to a temperature of at least about 100 degrees Centigrade, thereby facilitating the reaction and bonding of said amine-containing cationic compounds to fix said amine-containing compounds upon said textile substrate through the reactive group selected from the group consisting of epoxide, isocyanate, vinylsulphone, and halo-triazine. This chemical bonding occurs through a chemical reaction between the reactive group and the textile causing the compound and the textile to be chemically linked together. This occurs when the compound is applied to the textile and then the coated textile is subjected to elevated temperatures of over 100°C. Applicants respectfully believe that Nigam does not disclose the reactive dye fixing/receiving composition of the invention

Nigam teaches a reaction between the coating composition and the dye as shown, for example, in Col. 7, lines 40-60. In each of the examples, see Example 3 (a)-(k), the coating composition was applied to the textile and allowed to drip dry. This would not produce the coating composition being reacted to the textile substrate. Furthermore, if the coating composition of Nigam was reacted with the textile substrate, then the coating composition would not be able to react with dye and would change the principle of operation of the patent.

Applicants respectfully believe that Sismondi et al. and Mishima do not cure the deficiencies of Nigam. For example, Nigam, Sismondi et al., nor Mishima, together or singly, teach or suggest the amino compound being chemically bonded to the textile substrate through a reactive group selected from the group consisting of epoxide, isocyanate, vinylsulphone, and halo-triazine at a temperature of greater than 100°C. Additionally, Nigam, Sismondi et al., nor Mishima, together or singly, teach or suggest a reactive dye fixing/receiving composition being polyamine-co-epichlorohydrin as stated in amended claim 26.

Claims 26, 37, 48, and 58-63 were rejected as being unpatentable over Kawai et al. in view of Romano et al., in further view of Abe et al. Applicants respectfully traverse this rejection.

Each of the claim limitations must be taught or suggested by the prior art as stated in MPEP § 2142. As amended, Applicants believe that this standard is not met. Amended independent claim 26 has the recitation that the amine-containing cationic compound comprises a polyamine-co-epichlorohydrin **condensation** polymer, namely, poly(hexamethylenediamine-co-epichlorohydrin), which is sold as Kymene 736 (described in the specification on page 5, lines 25 and 31, and page 9 line 24) from Hercules Incorporated. Enclosed is an affidavit from Shulong Li confirming the chemical composition of Kymene 736. The cationic polymer of Kawai is formed from **addition** polymerization of a cationic monomer and a crosslinking monomer (para [0022-0023]) and the crosslinking monomer includes a silyl group (para [0026]). Therefore, Kawai does not teach a cationic polymer without a silyl group and does not teach Kymene 736. Applicants respectfully believe that this deficiency is not cured by the addition of Romano et al. and Abe et al.

Additionally, independent claims 37 and 48 have the recitation that the textile is woven or knitted cotton comprising textured or spun yarn which is not taught, suggested, or disclosed by Kawai, Romano et al. and Abe et al., taken singly or together.

Claims 26, 37, 48, and 58-63 were rejected as being unpatentable over Mishima in view of Kuwabara et al. The Office Action states that Mishima teaches a coating layer comprising an amine containing cationic compound and that the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render the Applicants' claims patentable in the absence of unexpected results. Applicants respectfully disagree with this conclusion.

Mishima discloses amino compounds as surface active agents, or surfactants in Col 15, line 62. Mishima does disclose numerous dye fixing compounds (referred to as dye-receptive polymers) from Col 3 line 40 to Col 8 line 13, but none of the dye-receptive polymers disclosed comprise an amino compound or have a positive charge density. Mishima does not teach an amine-containing cationic compound comprising a reactive group selected from the group consisting of epoxide, isocyanate, vinylsulphone, and halo-triazine (or the amine-containing cationic compound comprising poly(hexamethylenediamine-co-epichlorohydrin)) and that the treated textile is subjected to a temperature of greater than 100°C in order for the reactive group to react with the textile. The addition of Kuwabara et al. does not cure this deficiency.

Applicants believe that Mishima and Nagasaki were improperly combined for a *prima facie* obviousness rejection. First, Applicants submit that this reference does not constitute art which is analogous to the presently claimed subject matter and, therefore, the references cannot properly be combined with Mishima in support of a *prima facie* obviousness rejection of the pending claims. *In re Clay*, 23 U.S.P.Q.2d 1058, 1060 (Fed. Cir. 1992).

The Kobayashi et al. patent generally relates to an image recording paper having a recording surface comprised of a film obtained by coating or impregnating a substrate with a liquid composition comprising a silicone compound and a finely divided material (see, for example, the abstract of Kobayashi et al.). This reference does not disclose or suggest that the particular ink receiving layer or film disclosed therein can be applied to a textile substrate. Therefore, the Kobayashi et al. patent is not from the same field of endeavor as that in which the inventor of the presently claimed subject matter was

working.

Furthermore, the differences between the problems encountered by those developing paper, such as the recording paper of Kobayashi et al., are different from the problems encountered by those developing printable textile substrates. Therefore, the Kobayashi et al. patent would not have logically commended themselves to an inventor's attention in considering the problems encountered by those developing the presently claimed subject matter. *Id.* at 1061. Accordingly, the Kobayashi et al. patent does not constitute art which is analogous to the claimed invention.

Second, even if the Kobayashi et al. patent were combined with the Mishima publication, the resulting combination would not possess all of the features of the pending claims. For example, the Kobayashi et al. patent does not disclose or suggest that the amine-containing cationic compound comprising a reactive group selected from the group consisting of epoxide, isocyanate, vinylsulphone, and halo-triazine and that the treated textile is subjected to a temperature of greater than 100°C in order for the reactive group to react with the textile, as recited in the pending claims. Therefore, in view of the fact that both references are silent regarding this element, the combination of the two cannot properly be considered to disclose or suggest the subject matter recited in the pending claims.

In view of the foregoing, Applicants submit that the invention defined by the pending claims is not *prima facie* obvious over the cited references and therefore, the Section 103 rejections of the pending claims should be withdrawn.

Conclusion

In view of the foregoing, the application is considered in proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone interview would expedite prosecution of the instant application, the Examiner is invited to call the undersigned.

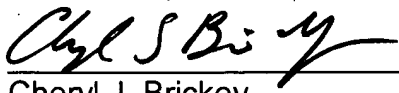
Fee Authorization: In the event that there are additional fees associated with the submission of these papers, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500.

Extension of Time: In the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for any additional time required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from our Deposit Account No. 04-0500.

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Respectfully submitted,

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